

AD-A050 820

STATE UNIV OF NEW YORK AT BUFFALO DEPT OF PSYCHOLOGY
LEADERSHIP DYNAMICS: A TRANSACTIONAL PERSPECTIVE. (U)

F/G 5/10

FEB 78 E P HOLLANDER

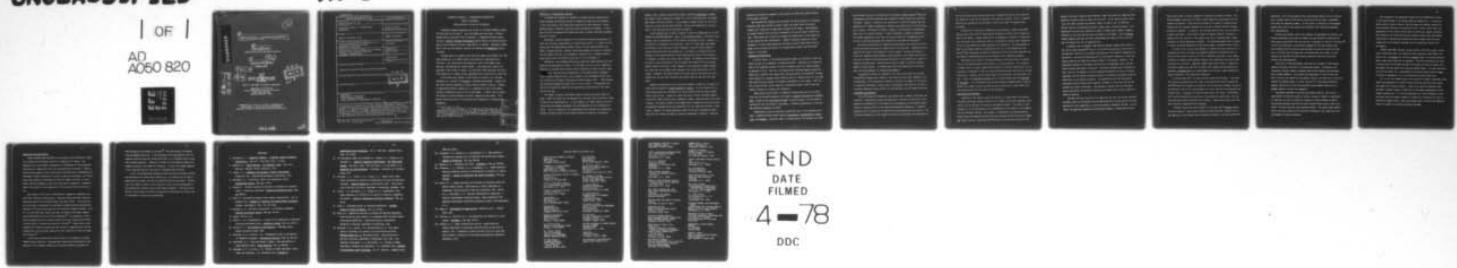
N00014-76-C-0754

NL

UNCLASSIFIED

TR-6

| OF |
AD
A050 820



END

DATE
FILMED

4-78

DDC

AD A050820

AD NO. **DDC FILE COPY**
DDC

(6)

Leadership Dynamics: A Transactional Perspective,

(12)

(10)

Edwin P. Hollander

State University of New York at Buffalo

(9)

Technical Report, No. 6

(14)

TR-

February 1978

(11) Feb 78

(12) 17P.

Prepared and distributed under
ONR Contract N00014-76-C-0754
NR 170-824

(15)

Edwin P. Hollander, Principal Investigator

Department of Psychology
State University of New York at Buffalo
4230 Ridge Lea Road
Buffalo, New York 14226

DDC
Report
MAR 21 1978
REF ID: A7 F

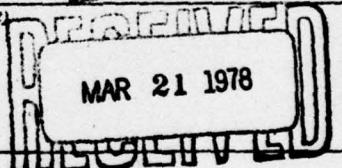
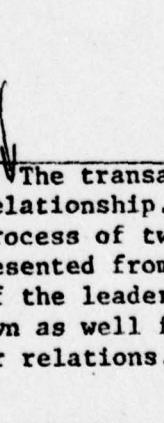
Reproduction in whole or in part is permitted for
any purpose of the United States Government.
Approved for public release and unlimited distribution.

403103

B

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Technical Report No. 6V	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Leadership Dynamics: A Transactional Perspective		5. TYPE OF REPORT & PERIOD COVERED Technical Report
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Edwin P. Hollander, Ph.D.		8. CONTRACT OR GRANT NUMBER(S) N00014-76-C-0754V
9. PERFORMING ORGANIZATION NAME AND ADDRESS Dept. of Psychology, State University of N.Y. at Buffalo, 4230 Ridge Lea Road Buffalo, New York 14226		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-824
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Programs Office of Naval Research (Code 452) Arlington, Virginia 22217		12. REPORT DATE February 1978
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 15
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 		
18. SUPPLEMENTARY NOTES 		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Leadership Organizational Performance Social Exchange Processes Leader Legitimacy in Appointment or Election		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The transactional approach to leadership is discussed as a social exchange relationship. Leadership dynamics is applied as the general term for the process of two way influence between the leader and followers. Results are presented from several experiments on the effects on follower responsiveness of the leader's legitimacy, in appointment or election. Implications are drawn as well for the effects of sex composition and task set on leader-follower relations.		

Leadership Dynamics: A Transactional Perspective*

Edwin P. Hollander

State University of New York at Buffalo

Leadership dynamics emphasizes the process of influence between a leader and those who are followers.¹ While the leader may have power, influence depends more on persuasion than on coercion. A leadership process usually involves a two-way influence relationship aimed primarily at attaining mutual goals, such as those of a group, organization, or society. Therefore, leadership is not just the leader's function but requires the cooperative efforts of others.

Although there is a common notion that the leader and followers fall into sharp categories, all leaders some of the time and to some degree are followers. And followers are not necessarily lost in non-leader roles. They may, and sometimes do, become leaders. Even though only some can be appointed to the status of leader, in a particular time and place, the qualities needed to be a leader are not possessed only by those who fill that role.

On the other hand, whether in the affairs of nations, or in the many components of a society, the quality of leadership does matter. Leaders who can guide ventures successfully clearly have an impact on quality. However, to understand effective leadership it is necessary to look at the leader-follower relationship, and not only at the leader. A fuller view of leadership needs to include followers and their responses to the leader. This process forms the basis for the transactional perspective, or approach to leadership.

* This paper was presented in the symposium entitled "New Light on Leadership Processes," on February 15, 1978, at the Annual Meetings of the American Association for the Advancement of Science, in Washington, D. C. The preparation of this paper was facilitated by the support of ONR Contract N0001476-C-0754.

ACCESSION for	W. H. Section	
NTIS	Buff. Section	
DDC		
UNANNOUNCED		
JUSTIFICATION		
BY		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	WL	SP
A		

Features of a Transactional Approach

A transactional approach to leadership stresses two-way influence and a social exchange relationship between the leader and those who are followers. In this relationship, the leader gives something and gets something. Social exchange refers to benefits which are given and received as rewards. It also has to do with the expectations people have about fairness, equitable treatment, and what is just.²

The leader is usually expected to give direction producing successful results for the group, organization, or larger social entity. In return, the followers give the leader greater esteem, status, and the responsiveness which makes influence possible. However, some minimum degree of success is necessary for the leader's position to be supported, because a lack of success removes a major benefit which the leader can provide in a "fair exchange."³

Therefore, a fair exchange would be one where the leader performs well and deserves the advantages of status. If the leader fails to do well, especially because of an evident lack of effort, then followers are likely to have a sense of discontent. They may also be discontent if the leader seems to disregard their interests along the way. When a leader's poor performance results from not listening to followers, there may be a feeling among them that blunders are being made because the leader fails to "be in touch." Followers may feel left out and blame the leader for not maintaining the other end of the transaction with them.

The leader is usually the central figure in moving the group toward its goals. Where the leader has the resources but routinely fails to deliver, there is bound to be dissatisfaction. If, for example, the leader appears to be deviating from the accepted standards, such nonconformity will be tolerated initially. This is a feature of the idiosyncrasy credit concept which emphasizes sources of earned status and the leader's related latitude for innovation.⁴

However, when a leader's nonconformity seems to produce unsuccessful outcomes, the leader is more vulnerable to blame.⁵ It is as if the group said, "We expect good results from your actions. If you choose an unusual course, we will go along with you and give you some latitude. But you are responsible if the outcome is that the group fails to achieve its goals."

A fair exchange also involves a climate in which the leader sees to it that rewards are provided equitably. Basic to the exchange process is the belief that rewards, such as recognition, will be received for benefits given. However, it is difficult to accomplish this routinely. Even if it were done, the rewards would take on less value due to their frequency, since the scarce reward is usually valued more than the abundant one. But there is an optimal range for rewards, so that some attention to their contributions, even if not frequent, is necessary if people are to feel fairly treated. Furthermore, some followers may have a closer relationship with the leader than others.⁶ This can produce greater benefits for them, in part because of the resources the leader commands. But there also can be higher costs because of the direct association with the leader. Therefore, the actual "profit" of those close to the leader may be no greater than for the other followers who receive less but who also have lower costs.

Summing up these points, the transaction between a leader and followers includes the two factors of system progress and equity. The first deals with attaining group goals and the second with the follower's sense of being treated fairly along the way. Simply put, where they have a choice, followers require a sufficient sense of being fairly rewarded to remain inside the group and to participate. This sense of equity often depends upon a comparison with what others, of comparable characteristics and responsibility, are receiving relative to their inputs. However, the leader especially needs to be alert to perceived inequities, and will likely be blamed for them as a determiner of rewards. These per-

ceptions are subjective judgments since rewards and costs are always relative to the people involved.

The transactional approach also considers the two-way nature of influence. Followers need some latitude to exert counter-influence rather than being locked into a situation of great power wielded by the leader. Relationships in leader-follower roles are easily affected by the use of power to exert control. Bold assertions of power by a leader can create costs to the leader and to the leader-follower relationship. Indeed, a desirable feature of social exchange is to help check egoism and the abuse of power.⁷ More realistically, power can be diffused and shared in an organization, rather than being held tightly in one place.

Leadership Effectiveness

A crucial factor in the exchange between leaders and followers is that the leader be seen to be competent in producing results. Therefore, the effectiveness of the leadership process is bound to become a basis for judging whether an exchange is fair. After all, the organization and group members reward the leader more liberally than anyone else, and good results are expected.⁸ Although often subjective, judgments about "getting results," "showing ability," and other such qualities carry weight in followers' perceptions of the leader. This factor is also the main initial source of idiosyncrasy credit, which allows the leader latitude for influence and innovation.

Those results which matter in leadership effectiveness are of two kinds. First are the standards measured with regard to quantity and quality of performance. Second are the way things are done in achieving goals, and the benefits provided for the individuals in the group. A related consideration is how well the available resources are used.⁹

Communication plays an especially significant role in the leadership process. Leadership effectiveness requires goal-setting, implementation, evaluation, and feedback. These are steps in a communication link between the leader

and followers that give a unified view of the group's common purpose.¹⁰ There are interpersonal qualities associated with leadership effectiveness and exercising influence. However, influence is not sufficient by itself but depends upon the perception of a leader's competence, fairness, and identification with the group and its goals. The content of these is judged in the particular circumstances which exist in a given situation. In most situations, a leader is expected to show enough competence on the task, and to have sufficient interpersonal skill, to help in gaining group goals with attention to the needs of followers.¹¹

The skills contributing to leadership effectiveness also include the ability to show foresight and planning in dealing with new conditions. Imagination and a sense of what might be are essential to this process. Training individuals in skills for leadership effectiveness is quite possible, even though some individuals can be identified who have greater potential to be effective as a result of capacity and experience. Maintaining the role of leader is another important aspect of effectiveness. It depends upon fulfilling expectations for performance, and being adaptable to changing requirements.

An important function of leadership is to facilitate efforts for planned change.¹² Some changes occur whether or not people initiate them, because of life circumstances. But change may be planned or resisted, or shaped, by the efforts of concerned individuals. Where a need is recognized, they take the initiative in seeking imaginative ways to meet new circumstances, and new leaders may arise.

Legitimacy and Authority

The effectiveness of leadership also depends upon a leader's legitimacy and authority. Legitimacy may come from appointment, election, or from the willing support of followers.¹³ It is the basis for the acceptance of the leader's assertions of influence, which is the operational meaning of authority. A leader's authority also is related to the nature of the rules governing the activity. The follower's perceptions of the leader's direction as consistent with organization-

al and individual goals also are pertinent. Responsibilities go with authority, but these may or may not be matched by the authority granted. Often, a leader's authority is enhanced by the followers' view of the leader as competent and motivated.

In addition to legitimacy, competence, and motivation, leaders have other personal qualities which are perceived by followers and affect their responsiveness to the leader. Indeed, there now is a resurgence of interest in people who fill the leader role, especially where it is possible to relate their characteristics to task demands and other aspects of the situation. This development is seen in contingency models of leadership as well as in the transactional approach.¹⁴ Both approaches are actually extensions of the situational approach and are aided at representing more of the richness of the leadership process.

The effect of a leader or followers depends on qualities which are appropriate to the leader-follower relationship in a given situation. The concept of a "leader style" is usually applied with respect to bi-polar comparisons, such as autocratic or democratic, task- or human relations-oriented, and close or distant supervision. However, each of these needs to be understood in a particular context. Style is a relational concept, and its effect depends upon the reaction of followers. It is therefore risky to make sweeping statements about a quality needed for a leader to have an effective style unless more is known about follower expectations and the nature of the situation.

Appointment and Election

Research on the leader's source of authority, in appointment or election, indicates that these factors interact with a leader's perceived competence, motivation, and the success or failure of the group's efforts. The stress in this research is on the relationship of the perceptions of the leader to the leader's and the followers' actions. For example, an experiment with problem-solving groups found that members were more willing to accept selfish action by an elected leader than by an appointed one!¹⁵ The action involved the division of the

group's "winnings," based on points earned. Under the rules, the leader had the authority to make a decision about that division. In the "self-oriented" condition, the leader assigned the greatest share to himself, and in the "equalitarian" condition he assigned everyone an equal share, including himself. This experiment also provided a measure of leader influence and a report by members afterward on how much they had been influenced by the leader. With an elected leader, members were more willing to acknowledge the extent to which they had been influenced than with an appointed one.

In another line of research, appointed and elected leaders were studied in the role of group spokesman.¹⁶ This is a role which has previously been found to be especially sensitive to followers' perceptions of the leader's competence and motivation. Serving as a spokesman puts an individual's standing to a test because contention and negotiation pose a threat to the group's integrity. The experiment focussed on the leader functioning in the spokesman role, achieved either through appointment or election. Two other variables were introduced as well, that is, the leader's initially perceived competence for being the group spokesman, and his evident success or failure in presenting the group's position effectively to an external authority. The expectation was that the elected spokesman would be chosen more frequently to remain in this role than the appointed one, other things equal. The procedure involved four-man discussion groups considering the problem of developing a defense for a fellow student accused of cheating.

The most striking finding of this experiment was that the elected spokesman was more likely to be rejected than the appointed one if he was either initially perceived to lack competence, or failed to produce a favorable outcome. By contrast, the appointed spokesman satisfied group members if there were any sign

that he was either initially competent or produced a successful outcome. This finding suggests that election created higher demands by group members for the leader's performance. There was also a greater willingness to change elected leaders when the incumbent appeared to be failing to produce desired outcomes, as might be expected. In election, the followers are the ones who can grant or withdraw legitimacy. While there is usually a greater sense of investment in someone that they have put in the leader's position, an elected leader remains vulnerable to being replaced by followers. For continued support from followers, a leader's perceived competence and motivation seems to be particularly crucial.

A review of the findings from research on leaders serving as negotiators in intergroup relations indicated that important behavioral differences were related to their source of authority.¹⁷ First, regarding legitimacy, those leaders elected by the group showed greater toughness than negotiators who had not been confirmed by an election. Appointed leaders were only as tough in negotiation as elected leaders when they had to consult their members during negotiations. Therefore, accountability to the group seems to be the main factor determining these differences in the negotiator's behavior.

In another experiment, on resolving human relations problems, it was found that elected representatives felt freer to be conciliatory than did appointed ones.¹⁸ Although this appears to contradict the findings just reviewed, two points are relevant. The kind of issues chosen will have a bearing on the approach negotiators take -- toughness for some and conciliation for others. Furthermore, while elected representatives may be more accountable as negotiators, they may also have more credits available from followers. These credits would give them more latitude to compromise when necessary.

A related finding from other research is also pertinent.¹⁹ Elected leaders, who could accept or reject group decisions on urban problems, rejected them about 50% more on the average than did appointed leaders in the same experimental

conditions. This finding seems to show that elected leaders in this situation felt a greater sense of latitude for deviating from the group's recommendations than did appointed leaders. On that point, an analysis of the messages leaders sent back to their groups when rejecting their decisions supported this interpretation.

Pursuing the broader line of this research on appointment or election, two related experiments were done with leaders who were elected or appointed and whose groups learned that they had done well ("success") or not well ("failure").²⁰ In the first experiment, twelve groups composed of four male students each were presented with the typical urban problems from the city called Colossus. This is the task that had been used in the experiment just noted, in which leaders could deviate from their group's decisions--and did so more when elected than when appointed.

The first of these experiments found that the influence of the elected leaders was greater than that of the appointed leaders. Furthermore, the influence of elected leaders increased after failure feedback and decreased after success feedback. This effect was interpreted in line with the idea that a "crisis" was created by the apparent failure, and there was a "rallying around" the elected leader, at least initially.²¹ In the success condition, however, there was no crisis and accordingly group members acted out of a greater security in their own judgments.

The second experiment also used the Colossus material, with a third phase added to study the results of having a change in leaders by appointment or election, and with the identical success or failure feedback as before. The guiding hypothesis was that the newly elected leader would be more influential initially than the newly appointed leader. The longer range interest was to look more closely at the followers' tolerance of the leader and their willingness to have him continue.

The findings of this experiment showed that the heightened influence of the elected leader in the second phase was indeed brief. In the group saw no signs of greater success, then the leader was deposed, despite his rise to greater influence following the crisis. After a point, then, the perpetuation of the crisis did not serve to sustain the leader's position. This finding is in accord with earlier research already noted which demonstrated that in groups which experienced failure leaders were held more responsible for the group's outcomes and lost esteem more rapidly than non-leaders.

Another experiment had male college students elect their group's leader after ratings were made in a Leaderless Group Discussion (LGD).²² Where the person with the highest LGD rating was elected leader, the groups performed most promptly when faced with an emergency. The worst performance was found in groups where the election had been so arranged as to make it appear that the member with the lowest LGD rating was elected leader. The main conclusion was that the leader who is legitimated by the group through election, after a process of emergence, is in a strong position to get things done.

All in all, the research done on the source of a leader's legitimacy indicates that appointment or election create different realities within which the leader and followers operate. A case can be made that election gives followers a greater sense of responsibility and higher expectations for the leader's performance. This can be understood as a social exchange in which the group gives the leader a benefit in advance, by electing him or her to a position of higher status. Then group members feel a claim on the leader to return the benefit by producing favorable outcomes.

Conclusions and Implications

From a transactional perspective, the research just considered is especially notable for the dynamic quality of leadership it stresses. The emphasis is on the followers' perceptions in relationship to the perceptions and actions of leaders and, then, the counteractions of followers. Clearly, there are many aspects of this relationship that need to be investigated more thoroughly, beyond the matters of source of authority and success or failure. Among those aspects are the means by which the leader's position is legitimated, and the validators to whom the leader must be responsive. Relatedly, there is the matter of the composition of the group and the way the task is set.

With regard to the first of these matters, research on leadership has most often involved all-male groups. Mixed-sex groups have been relatively neglected, despite the different dynamic they may present. In our own work on such groups, we conducted two exploratory studies using the same Colossus materials, with each group made up of two male and two female students. Overall, we found that male leaders were more influential than female leaders, and we attributed this to a sex-role stereotype.²³ We recognize of course that the generalizability of these results may also be constrained by other limiting factors, including the nature of the task.²⁴ Indeed, other recent research with mixed-sex groups goes even further in suggesting that the sex composition of the group may redefine the task situation for both the leader and followers.²⁵

In this vein, the particular task, and how it is presented, do affect leader-follower relations. One experiment showed that the expectation that there will be an external evaluation of the group created not greater but

less reliance on the leader by followers.²⁶ This was contrary to expectation and seemed surprising. It was explained by the consideration that the opposite condition which was established--that is, no statement about evaluation--created ambiguity. Therefore, an effect of this ambiguity might be to enhance reliance on the leader as a resource. In short, the leader appeared to be valued more than as a provider of information and direction.

In sum, the transactional perspective sees followers as having an active and responsive role rather than a passive one. All actions are not seen to depend upon the leader, nor must all benefits come from the leader. Furthermore, the leader's posture is not necessarily fixed, but may accommodate to the expectations followers have for the leader's behavior. This more active sense of the follower role offers the possibility and promise of richer forms of involvement in groups and organizations.

References

1. Hollander, E. P. Leadership dynamics: A practical guide to effective relationships. New York: Free Press, 1978. In press.
2. Homans, G. C. Social behavior: Its elementary forms. (Rev. Ed.) New York: Harcourt, Brace, Jovanovich, 1974.
3. Jacobs, T. O. Leadership and exchange in formal organizations. Alexandria, Va.: Human Resources Research Organization, 1970.
4. Hollander, E. P. Conformity, status, and idiosyncrasy credit. Psychological Review, 1958, 65, 117-127.
5. Alvarez, R. Informal reactions to deviance in simulated work organizations: A laboratory experiment. American Sociological Review, 1968, 33, 895-912.
6. Graen, G. Role-making processes within complex organizations. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand McNally, 1975. Pp. 1201-1245.
7. Gouldner, A. W. The norm of reciprocity: A preliminary statement. American Sociological Review, 1960, 25, 161-179.
8. Jacobs, 1970, op. cit.
9. Steiner, I. D., & Rajaratnam, N. A model for the comparison of individual and group performance scores. Behavioral Science, 1961, 6, 142-147.
10. Barnard, C. I. The functions of the executive. Cambridge, Mass.: Harvard University Press, 1938.
11. Hollander, E. P., & Julian, J. W. Contemporary trends in the analysis of leadership processes. Psychological Bulletin, 1969, 71, 387-397.
12. Cartwright, D. C. Achieving change in people: Some applications of group dynamics theory. Human Relations, 1951, 4, 381-393.
13. Hollander, E. P., & Julian, J. W. Studies in leader legitimacy, influence, and innovation. In L. Berkowitz (Ed.), Advances in

- experimental social psychology. Vol. 5. New York: Academic Press, 1970. Pp. 33-69.
14. Two contingency models are presented in: Fiedler, F. E., Chemers, M. M., and Maher, L. Improving leadership effectiveness: The leader match concept. New York: Wiley, 1976; and Vroom, V. H. and Yetton, P. W. Leadership and decision-making. Pittsburgh: University of Pittsburgh Press, 1973.
15. Hollander, E. P., Julian, J. W., & Perry, F. A. Leader style, competence, and source of authority as determinants of actual and perceived influence. Technical Report No. 5, ONR Contract 4679. State University of New York at Buffalo, Department of Psychology, September, 1966.
16. Julian, J. W., Hollander, E. P., & Regula, C. R. Endorsement of the group spokesman as a function of his source of authority, competence, and success. Journal of Personality and Social Psychology, 1969, 11, 42-49.
17. Lamm, H. Intragroup effects on intergroup negotiation. European Journal of Social Psychology, 1973, 3, 179-192.
18. Boyd, N. K. Negotiation behavior by elected and appointed representatives serving as group leaders or as spokesmen under different cooperative group expectations. Unpublished doctoral dissertation. University of Maryland, Department of Psychology, 1972.
19. Hollander, E. P., Julian, J. W., and Sorrentino, R. M. The leader's sense of legitimacy as a source of his constructive deviation. Technical Report No. 12, ONR Contract 4679. State University of New York at Buffalo, Department of Psychology, July, 1969. Also reported in Hollander, E. P., and Julian, J. W. Studies in leader legitimacy, influence, and innovation. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology. Vol. 5. New York: Academic Press,

- 1970, Pp. 33-69.
20. Hollander, E. P., Fallon, B. J., and Edwards, M. T. Some aspects of influence and acceptability for appointed and elected group leaders. Journal of Psychology, 1977, 95, 289-296.
21. Hamblin, R. L. Leadership and crises. Sociometry, 1958, 21, 322-335.
22. Firestone, I. J., Lichtman, C. M., & Colamorsca, J. V. Leader effectiveness and leadership conferral as determinants of helping in a medical emergency. Journal of Personality and Social Psychology, 1975, 31, 243-248.
23. Fallon, B. J. Leader legitimacy and influence in mixed-sex groups with male or female leaders. Unpublished M.A. thesis, Department of Psychology, State University of New York at Buffalo, 1973. Fallon, B. J., & Hollander, E. P. Sex-role stereotyping in leadership: A study of undergraduate discussion groups. Paper presented at the American Psychological Association Convention, August, 1976, Washington, D. C.
24. Deaux, K. The behavior of women and men. Monterey, Calif.: Brooks/Cole, 1976.
25. Eskilson, A., and Wiley, M. G. Sex composition and leadership in small groups. Sociometry, 1976, 39, 183-194.
26. Edwards, M. T. Leader influence and task set. Unpublished M.A. Thesis, Department of Psychology, State University of New York at Buffalo, 1973. Presented as a paper entitled "Effect of group task set on leader's influence" at the Eastern Psychological Association Convention, 1975.

Technical Report Distribution List

Office of Naval Research (3 copies)
(Code 452)
800 N. Quincy St.
Arlington, Virginia 22217

Director, U. S. Naval Research
Laboratory (6 copies)
Washington, D. C. 20390
ATTN: Technical Information Division

Defense Documentation Center (12 copies)
Building 5
Cameron Station
Alexandria, Virginia 22314

Library, Code 2029 (6 copies)
U. S. Naval Research Laboratory
Washington, D. C. 20390

Science & Technology Division
Library of Congress
Washington, D. C. 20540

Psychologist
ONR Branch Office
495 Summer St.
Boston, Massachusetts 02210

Psychologist
ONR Branch Office
1030 E. Green St.
Pasadena, California 91106

Research Psychologist
ONR Branch Office
536 S. Clark St.
Chicago, Illinois 60605

Dr. Arthur Blaiwes
Naval Training Equipment Center
Orlando, Florida 32813

Dr. Fred E. Fiedler
Dept. of Psychology
University of Washington
Seattle, Washington 98105

Dr. Rudi Klauss
Syracuse University
Public Admin. Dept.--
Maxwell School
Syracuse, New York 13210

Dr. Arlie Lewin
Duke University
Duke Station
Durham, North Carolina 27706

Dr. Morgan W. McCall, Jr.
Center for Creative Leadership
5000 Laurinda Drive
P.O. Box P-1
Greensboro, North Carolina 27402

Dr. Terence R. Mitchell
School of Business Administration
University of Washington
Seattle, Washington 98195

Dr. Manuel Ramirez
Systems and Evaluations
232 Swanton Blvd.
Santa Cruz, California 95060

Dr. Richard Steers
Graduate School of Management
and Business
University of Oregon
Eugene, Oregon 97403

Dr. Victor H. Vroom
School of Organizational Management
Yale University
56 Hillhouse Ave.
New Haven, Connecticut 06520

Dr. Paul Wall
Division of Behavioral Science
Tuskegee Institute
Tuskegee, Alabama 36088

Military Assistant for Human Resource:
OOD (E&LS) ODDR&E
Pentagon 3D129
Washington, D. C. 20301

AFOSR (NL)
1400 Wilson Blvd.
Arlington, Virginia 22209

Air University Library/LSE-8110
Maxwell AFB, Alabama 36112

Army Research Institute (2 copies)
5001 Eisenhower Avenue
Alexandria, Virginia 22333

Chief, Psychological Research Branch
U. S. Coast Guard (G-P-1/62)
400 7th St., S. W.
Washington, D. C. 20590

Dr. A. L. Slafkosky
Scientific Advisor
Commandant of the Marine Corps
(Code RD-1)
Washington, D. C. 20380

Chief of Naval Personnel
Assistant for Research Liaison
(Pers-Or)
Washington, D. C. 20370

Bureau of Naval Personnel (Pers-6)
Assistant Chief of Naval Personnel
for Human Goals
Washington, D. C. 20370

Cdr. Paul D. Nelson, MSC, USN
Head, Human Performance Division
(Code 44)
Navy Medical R&D Command
Bethesda, Maryland

Navy Personnel R&D Center (5 copies)
Code 10
San Diego, California 92152

Commanding Officer
Naval Training Equipment Center
Technical Library
Orlando, Florida 32813

Officer in Charge (Code L5)
Naval Aerospace Medical Research Lab.
Naval Aerospace Medical Center
Pensacola, Florida 32512

Capt. Bruce G. Stone, U.S.N.
(Code N-33)
Director, Education & Training
Research and Program Development
Chief of Naval Education and
Training Staff
Naval Air Station
Pensacola, Florida 32508

Navy Materiel Command
Employee Development Office, Code SA-65
Rm. 150 Jefferson Plaza, Bldg. #2
1429 Jeff Davis Highway
Arlington, Virginia 20360

HumRRO (ATTN: Library)
300 N. Washington St.
Alexandria, Virginia 22314

Director of Research
HumRRO Division #4 (Infantry)
P. O. Box 2086
Fort Benning, Georgia 31905

Journal Supplement Abstract Service
APA
1200 17th St., N. W.
Washington, D. C. 20036

Mr. Luigi Petrullo
2431 N. Edgewood St.
Arlington, Virginia 22207

Capt. Charles Baldwin, U.S.N.
Bureau of Naval Personnel
(Pers-65)
Washington, D. C. 20370

Ms. Elsa A. Porter
Clearinghouse on Productivity &
Organizational Effectiveness
U. S. Civil Service Commission
Washington, D. C. 20415

Dr. Thomas Gordon
Effectiveness Training Inc.
531 Stevens Ave.
Solana Beach, Cal. 92075

Personnel Research and Development
Center
United States Civil Service Commission
Bureau of Policies and Standards
Washington, D. C. 20415

Department of the Air Force
Air Force Institute of Technology (AU)
AFIT/SLGR (LT Col Umstot)
Wright-Patterson Air Force Base
Ohio 45433

Headquarters, Forces Command
AFPE-HR
Ft. McPherson
Georgia 30330

Eugene F. Stone
Dept. of Administrative Sciences
Purdue University
West Lafayette, Indiana 47907